TSC 9b

TS20P01G THRU TS20P07G

Single Phase 20.0 AMPS. Glass Passivated Bridge Rectifiers



Voltage Range 50 to 1000 Volts Current 20.0 Amperes

Features

- ♦ UL Recognized file # E-96005
- Glass passivated junction
- ♦ Ideal for printed circuit board
- ♦ Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- ♦ Surge overload rating to 250 amperes peak
- → High case dielectric strength of 2000 V_{RMS}

Mechanical Data

- ♦ Case: Molded plastic
- Terminals: Leads solderable per MIL-STD-750. Method 2026
- ♦ Weight: 0.3 ounce, 8 grams
- ♦ Mounting torque: 8.17 in. lbs. max.

TS-6P C.118(3.0) X45' 1.193(30.3) 1.169(29.7) 1.193(30.3) 1.169(29.7) 1.193(30.3) 1.169(29.7) 1.193(30.3) 1.169(29.7) 1.193(30.3) 1.14(1.2) 1.134(3.4) 1.134(3.4) 1.14(2.9) 1.14(2.9) 1.150(3.8) 1.14(2.9) 1.150(3.8) 1.165(4.2) 1.150(3.8) 1.165(4.2) 1.150(3.8) 1.109(2.5) 1.109(2.5) 1.100(2.7)

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25° C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number | Symbol | TS20P 01G | TS20P 02G | TS20P 03G | TS20P 04G | TS20P 05G | TS20P 06G | TS20P 07G | Units |
|---|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current See Fig. 1 | I _(AV) | 20.0 | | | | | | | Α |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I _{FSM} | 250 | | | | | | | Α |
| Maximum Instantaneous Forward Voltage @ 20.0A | V _F | 1.1 | | | | | | | ٧ |
| Maximum DC Reverse Current @ T _A =25°C | I _R | 10.0 | | | | | | | uA |
| at Rated DC Blocking Voltage @ T _A =125℃ | יא | 500 | | | | | | | uA |
| Typical Thermal Resistance (Note) | $R\theta_{JC}$ | 0.8 | | | | | | | ℃W |
| Operating Temperature Range | TJ | -55 to +150 | | | | | | | ${\mathbb C}$ |
| Storage Temperature Range | T _{STG} | -55 to + 150 | | | | | | | Ç |

Note: Thermal Resistance from Junction to Case with Device Mounted on 5" x 7" x 0.25" Al-Plate Heatsink.



RATINGS AND CHARACTERISTIC CURVES (TS20P01G THRU TS20P07G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE 25 AVERAGE FORWARD CURRENT. 20 10 5 0 <u>L</u> 40 60 80 100 120 140 160 CASE TEMPERATURE. (°C)

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

100

201

1.5 2 3 4 56 78 910 15 20 25 30 40 60 80 100

NUMBER OF CYCLES AT 60Hz

FIG.3- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



